DOCUMENT RESUME

ED 101 404 CS 500 967

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TITLE The Assessment of Source Credibility as a Function of Information Seeking Behavior.
PUB DATE Apr 74
NOTE 17p.; Paper presented at the Annual Meeting of the Southern Speech Communication Association (Richmond, Virginia, April 1974)

EDRS PRICE MF-$0.76 HC-$1.58 PLUS POSTAGE
DESCRIPTORS College Students; *Communication (Thought Transfer); *Credibility; *Educational Research; Higher Education; Human Relations; *Information Seeking; Information Theory; *Interpersonal Relationship; Research Methodology; Research Tools

ABSTRACT

This paper reports on the results of two empirical studies which attempt to cast the source credibility variable in communication into a human information processing paradigm. The subjects for the studies were college students in an introductory communication course. The first study deals with the degree to which the processes of source credibility assessment and information seeking behavior can be considered to be structurally isomorphic. The second study seeks support for the proposition that more information is processed for and about perceived high credible persons than those with perceived lower credibility. Taking both cited studies into account, directions for additional research are offered. (Author/RB)

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THE ASSESSMENT OF SOURCE CREDIBILITY AS A FUNCTION OF INFORMATION SEEKING BEHAVIOR

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Presented to

Southern Speech-Communication Association
Richmond, Virginia

April 10, 1974

CS 500 967

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An Abstract

The paper reports the results of two empirical studies which attempt to cast the source credibility variable in communication into a human information processing paradigm. The first study deals with the degree to which the processes of source credibility assessment and information seeking behavior in order to make such evaluation can be considered to be structurally isomorphic. The second study seeks support for the proposition that more information is processed for and about perceived high credible persons than those with perceived lower credibility.

THE ASSESSMENT OF SOURCE CREDIBILITY AS A FUNCTION OF INFORMATION SEEKING BEHAVIOR

Introduction

The purpose of this manuscript is to report the results of two empirical research projects, both of which, attempted to cast selected communication variables into a human information processing paradigm. Recently, communication scholars (Saltiel and Woelfel, 1973; Scott and Lashbrook, 1974) have suggested that there might be much theoretical value in viewing "man the communicator" as an information processing system. Further, they contend that the communication act could well be interpreted as the linear processing of accumulated information.

One of the most researched variables in the evaluation of communication is source credibility. The now traditional approach to this variable has been to consider it a receiver's multi-dimensional attitudinal perception toward a source of communication. The notion that it is an attitude placed the variable in the domain of a predisposition to behave (Lashbrook, 1971). The authors of this paper would prefer to consider any attitude as a predisposition to perceive and as such to use such a construct in the prediction of the manners in which individuals process information. To a large extent our position stems from the rationales provided by Holdridge and Lashbrook (1973) and Lashbrook and Bush (1973) in studying a process labeled belief acceptance. That is, there is a need to consider the degree to which communication affects an individual's notions of uncertainty. It will be recalled that the very early work in the area of information theory (Shannon and Weaver, 1949) offered a similar view of communication.

Study Number 1

The first study to be discussed in this paper deals with an attempt to explicate source credibility assessment as a linear function of information seeking behavior (Lashbrook, Daley, Hamilton, and Todd, 1972). The study was predicated on the assumption that source credibility assessment and information seeking behavior are interpretations of the same underlying calculus and as such are structurally isomorphic (Rudner, 1966). As such, four basic propositions seem important with respect to source credibility:

(1) There exists a code composed of elements and rules of grammar which is common among subjects of a given population and in which source credibility assessments can be made.

(2) There exists a subset of those language elements (adjectives) that can be considered to be linearly related to one another.

(3) The linearity concept is not significantly violated when the adjectives are used as finite boundaries for the expression of individual perceptions.

(4) Subjects of a given population will tend to select informational stimuli perceived relevant to the assessment of source credibility within the boundaries set by the adjectives they commonly employ in evaluation.

In order to provide some empirical support for these propositions students enrolled in a basic communication course were given, in random order, twelve semantic differential type scales representing the competence, character, composure, and extroversion dimensions of source credibility (McCroskey, Jensen, and Todd, 1972). Each subject was asked to examine each

scale carefully and then to write down (in a question format) the kinds of information he felt he would need to know about a particular source of communication in order to make an assessment of his or her source credibility in terms of that scale. The subject was then presented the eleven remaining scales and asked to indicate which of them he would be willing to fill out given the answers to his questions. This procedure was repeated twelve times by each subject with each scale being used to stimulate information seeking questions. Randomization was maintained across both subjects and scale items. This data was then subjected to a cluster analysis to determine if the subjects linked the scales in a manner similar to that suggested by the factor analysis that lead to their discovery. The results showed that the subjects linked the scales together in the same manner that other subjects had done when actually evaluating public figures. That is, the information seeking approach to clustering the scale items yielded the same factor structure as the evaluation of a known source approach suggested by previous research (see Table 1).

As an adjunct to the study, the subjects were given answers to the questions they asked concerning three historical figures (William Jennings Bryan, Thomas Jefferson and Andrew Jackson). All answers were in the form of paragraphs taken from Hofstadter's, American Political Traditions (1948). This was done to insure comparable writing style and language complexity across answers. It should be noted that each subject involved in this aspect of the study received only material relevant to the questions he asked in response to the scale items. Each subject evaluated the three public figures under conditions of information only, information and correct identification of the figure and a condition where only the name of the

figure was given. While the results of this part of the study were somewhat obtuse, it did appear that when the figure's name alone resulted in a receiver perception of relatively high credibility and subjects were given information about the figure, the estimates of derived credibility were extremely varied. Whereas, when the figure's name alone resulted in a receiver perception of relatively low credibility and subjects were given information about the figure, the estimates of derived credibility were not significantly different from the name only condition. This observation suggested another propositional statement to be empirically tested; namely, that more information stimuli will be processed about persons believed to have high credibility than will be for persons believed to have low credibility. To put this another way, information about high credible persons will be perceived more relevant, and thus processed, than will information about persons believed to have low credibility.

Study Number 2

In order to obtain empirical support for this additional proposition it was decided that a second study would be conducted. In this research the variable of source credibility would be manipulated and tested against possible effects relating to information transmission and recall. Using as a starting point the questions asked by receivers in study number one when required to fill out particular scale items, the researchers constructed two credibility inductions each containing 37 bits of information of a denotative nature. It is important to note that the information contained in the inductions made no evaluative judgments concerning the various activities of the sources. Also, the inductions referenced fictitious

rather than actual public figures. Each induction was approximately 300 words in length, contained 24 sentences and had Flesch Readability (1948) scale values in the range of 60 - 62 which put them in the norm of standard ease of comprehension. In other words, a great deal of attention was given to the construction of a high and low credibility inductions which were at the same information level, but which the researchers believed receiver's would perceive to have differing values when responsed to along the four dimensions of source credibility -- competence, character, composure and extroversion (McCroskey, et. al., 1972). Assuming that receivers would make an evaluative distinction between two credibility inductions constructed at the same informational level, the researcher's hypothesized that more information would be processed about the high credible source than would be processed about the low credible source.

How to measure information processing in the context previously discussed did raise an important issue. The researchers reasoned thusly: the more information processed about a particular source, the more that source should be able to reduce uncertainty in the minds of his or her receivers. To a large extent, the high credible sources should be perceived more believable than low credible sources. Believability is viewed as a subjective probability estimate involving an object and some related concept or attribute (Holdridge and Lashbrook, 1973). Previous research conducted by Fishbein and Raven (1962) has yielded a set of semantic differential type scales that are orthogonal to scales measuring attitudes and yet seem to tap into the type of subjective probability levels associated with believability. A second approach to the measurement of information processing stems from the use of cloze procedure. Developed by Taylor (1953, 1957) the procedure

has been found useful in gauging the correspondence between encoders and decoders of communication in terms of word selections. The researchers thus reasoned that the degree of correspondence between source credibility inductions and cloze procedures scores on those inductions by their receivers would reflect the amount of information processing that occurred as a result of source credibility assessment.

Eighty-five subjects drawn from a basic communication course were utilized in the study. Twenty experimental subjects were given the credibility induction believed to be high by the researchers and twenty-one subjects were given the induction believed to be low. After reading the inductions, the experimental subjects were asked to evaluate the credibility of the person described in terms of his competence, character, composure and extroversion. In addition, the source was evaluated in terms of his believability as measured by three of the Fishbein and Raven B scales. The experimental subjects were then given a cloze procedure test on the inductions they read. The nth word technique was used in construct the test and there were sixty blanks for both the supposed high and low credibility inductions. Twenty-two control subjects received only the cloze procedure test for the high credible source and twenty-two different control subjects received the cloze procedure test for the low credible source. The researchers hypothesized that the high credible source as a result of the inductions would be perceived more competence, of higher character, more composed and less extroverted than the low credible source. Further, assuming that the credibility manipulation did take, the high credible source would be perceived more believable than the low credible source. In addition, the cloze procedure scores for the subjects receiving the high

credible induction were predicted to be higher than for subjects receiving the low credibility induction. As a manipulation check, the cloze scores for the experimental subjects were predicted to be higher than for the control subjects.

Table 2 shows results of experimental subjects' responses to the high and low inductions in terms of perceived source credibility. It can be seen that in terms of competence, character, and composure, there were significant ($p < .05$) perceivable differences between the two inductions. There was not a significant difference ($p > .05$) between the two inductions in terms of perceived extroversion.

With respect to the B scales for the person being evaluated, the high credible source ($\bar{X} = 16.35$) was perceived to be significantly more ($t = 3.47$, $p < .05$) believable then the low credible source ($\bar{X} = 12.81$).

In order to statistically analyze the cloze procedure results a 2x2 AOV procedure (Winer, 1971) was utilized in order to get a precise estimate of the error term for the appropriate t-test comparisons. Table 3 shows the results of the AOV analysis. Table 4 shows the mean values to be compared. It can be seen that for the experimental subjects, the ones receiving the high credible induction ($\bar{X} = 43.55$) scored significantly higher ($t = 3.72$, $p < .05$) on the cloze procedure test than did those who received the low credible induction ($\bar{X} = 36.05$). It can also be seen that the experimental group receiving the high credible induction did significantly better (Dunnett's $t = 4.00$, $p < .05$) than its control group ($\bar{X} = 35.59$). Likewise, the experimental group receiving the low credible induction scored significantly (Dunnett's $t = 4.22$, $p < .05$) higher on the cloze procedure test than its control group ($\bar{X} = 27.95$). It can also be seen that there was a

significant difference ($t = 3.98$, $p < .05$) between the control groups in favor of those processing the high credible induction.

As a form of post hoc analysis the researchers investigated the correlation between the source credibility dimensions, and believability with the cloze procedure scores of the experimental subjects. Table 5 represents the rs obtained. It can be seen that there was a significant positive correlation ($p < .05$) between the cloze scores and the perceived competence, character, composure and believability of the sources described in the two inductions.

The researchers viewed the results of the analyses of the believability scales and the cloze procedure test scores when taken in conjunction with the fact that the two inductions did produce significant perceivable differences on three of four dimensions of source credibility, as empirical support for their contention that more information is processed for and about high credible persons than for low credible sources.

Conclusions

Taking both cited studies into account, the authors offer the following statements as propositions for additional research:

(1) Credibility inductions can and probably often are processed in terms of their information value.

(2) High credible inductions will be perceived to have more informational value than low credible inductions.

(3) The effects of the perceived information level of a message are additive to the perceived information value of its source induction.

(4) There is a point where the combination of the perceived informa-

tion level of an induction and the information level of a message constitutes an "over load" condition.

It would appear that when evaluated from an information processing point of view some of the confounding effects of source credibility can not only be explained, but utilized in the development of a more sophisticated theory of human communication than currently exists.

REFFRENCES

Ferguson, G. S. Statistical analysis in psychology and education. New York: McGraw-Hill, 1971.

Fishbein, M. and Raven, B. An operational definition of belief and attitude. Human Relations, 1962, 15, 35-44.

Flesch, R. F. A new readability yardstick. Journal of applied psychology, 1948, 32, 221-233.

Hofstadter, R. American political traditions. New York: Alfred Knopf, 1948.

Holdridge, W. and Lashbrook, W. A functional analysis of the processes involved in belief acceptance. Paper presented at the meeting of the Speech Communication Association of America, New York, 1973.

Lashbrook, V. Source credibility: a summary of experimental research. A paper presented at the meeting of the Speech Communication Association of America, San Francisco, 1971.

Lashbrook, W., Daley, J., Hamilton, P., and Todd, W. A theoretical consideration of the assessment of source credibility as a linear function of information seeking behavior. A paper presented at a meeting of the Western States Speech Communication Association, 1972.

Lashbrook, W., and Bush, T. An empirical investigation of apathetic and neutral attitude response to manipulations of source credibility, use of evidence and language intensity. Paper presented at the meeting of the Western Speech Communication Association, Albuquerque, 1973.

McCroskey, J., Jensen, T., and Todd, C. The generalizability of source credibility scales for public figures. Paper presented at the meeting of the Speech Communication Association of America, Chicago, 1972.

Rudner, R. Philosophy of social science. Englewood Cliffs, N.J.: Prentice-Hall, 1966.

Saltiel, J. and Woelfel, J. Accumulated information as a basis for attitude stability. Paper presented at the meeting of the Speech Communication Association of America, New York, 1973.

Scott, M., and Lashbrook, W. Man-machine interface: a reconceptualization of communication education. Paper presented at the meeting of the International Communication Association, New Orleans, 1974.

Shannon, C., and Weaver, W. The mathematical theory of communication. Champaign, Ill.: University of Illinois Press, 1949.

Taylor, W. L., Cloze procedure: a new tool for measuring readability. Journalism Quarterly, 1953, 30, 415-433.

Taylor, W. L. Recent developments in the use of cloze procedure. Journalism Quarterly, 1956, 33, 42-48, 99.

Winer, B. J. Statistical principles in experimental design. New York: McGraw-Hill, 1971.

TABLE 1

Cluster and Factor Analysis Structures
for Source Credibility Scales

SCALE ITEM	FACTOR			
	Competence	Character	Composure	Extroversion
Intelligent-Unintelligent	.75 (.67)	.17 (.34)	.04 (.17)	.10 (.13)
Trained-Untrained	.67 (.70)	.19 (.36)	.10 (.13)	.12 (.23)
Informed-Uninformed	.65 (.71)	.17 (.32)	.08 (.06)	.16 (.24)
Good-Bad	.15 (.22)	.64 (.82)	.09 (.01)	.09 (.11)
Reliable-Unreliable	.29 (.21)	.63 (.80)	.05 (.19)	.07 (.07)
Honest-Dishonest	.11 (.12)	.76 (.76)	.03 (.06)	.06 (.01)
Nervous-Poised	.09 (.07)	.02 (.30)	.70 (.69)	.27 (.35)
Tense-Relaxed	.07 (.00)	.06 (.23)	.66 (.72)	.31 (.36)
Calm-Anxious	.10 (.25)	.04 (.24)	.72 (.60)	.19 (.01)
Meek-Aggressive	.17 (.15)	.06 (.00)	.26 (.06)	.53 (.69)
Verbal-Quiet	.17 (.11)	.09 (.01)	.24 (.15)	.62 (.77)
Talkative-Silent	.16 (.17)	.06 (.03)	.20 (.01)	.66 (.75)

Loadings in parentheses represents those originally obtained via factor analysis by McCroskey, et. al., 1972.

TABLE 2

Perceived Source Credibility
for High and Low Inductions

Dimension	High $\bar{X}s$	Low $\bar{X}x$	t-Value	Sig.*
Competence	19.50	12.67	7.64	$p < .05$
Character	17.55	13.05	3.93	$p < .05$
Composure	15.55	13.09	2.51	$p < .05$
Extroversion	15.40	15.57	0.91	$p > .05$

* $t \geq 1.69$ $p < .05$

TABLE 3

2x2 AOV For
Cloze Procedure Scores

Source	SS	df	MS	F	Sig.*
A-Exp vs Control	1303.53	1	1303.53	33.08	$p < .01$
B-High vs Low	1156.81	1	1156.81	29.36	$p < .01$
A*B	30.90	1	30.90		
Error	3191.78	81	39.40		
Total	5683.01	84			

* $F \geq 3.96$ $p < .05$

TABLE 4

Mean Values for
Cloze Procedure Scores

Induction	Experimental	Control
High	43.35 n = 20	35.59 n = 22
Low	36.05 n = 21	27.95 n = 22

TABLE 5

Correlations of Source Credibility
and Believability Perceptions to Cloze Scores

Dimension		Sig. ($r>0$)*
Competence	.54	$p < .05$
Character	.57	$p < .05$
Composure	.55	$p < .05$
Extroversion	.24	$p > .05$
Believability	.60	$p < .05$

* $r \geq .32$, $p < .05$ for $H_o: r = 0$ (Ferguson, 1971)